## INSTRUCTION

## TRANSPORT, MOVEMENT AND STORAGE OF HDPE POLYETHYLENE PIPES PRODUCED BY TT PLAST SA

When transporting and storing pipes, pay special attention not to damage them. Polyethylene is a material with relatively low mechanical resistance to scratching.

## PIPE TRANSPORT:

1. To transport pipes, use cars with an even and flat floor, free from nails and other irregularities in the loading area, or specialized cars.
2. Side supports should be flat and without sharp edges.
3. Pipes with the largest diameter should be placed at the bottom of the cargo area.
4. Pipes should not be transported outside the cargo area of the car in a part larger than five times the value of their nominal diameter DN expressed in meters, or a length of 2 m , depending on which of these values is smaller.
5. At low ambient temperatures, more attention must be paid when loading and unloading, as the impact resistance of plastic products decreases at low temperatures.
6. The loading height during transport should be such that it does not damage them and ensures the stability of the stack.
7. Pipes should be secured against movement during transport.
8. Products should be transported in accordance with applicable transport regulations.

## MOVING PIPES:

1. Measures must be taken to prevent damage to the pipes during movement
2. Plastic pipes may be damaged as a result of contact with objects with sharp edges, during dropping, falling or dragging on the ground
3. It is recommended to use fiber ropes and slings to lift or move pipes. Metal beams, slings, hooks or chains used incorrectly can damage the pipe.
4. When loading and unloading pipes with a crane, slings made of soft ropes (nylon, cotton-hemp, etc.) should be used - steel ropes or chains must not be used.
5. When loading or unloading pipes with a forklift, forklifts with smooth forks should be used. Extra care should be taken when lifting pipes to avoid breaking them.
6. Pipes with smaller diameters (up to 160 mm ) can be moved manually on the construction site. It is unacceptable to drag them on the ground, throw them or roll them.
7. At low temperatures, the impact resistance of artificial pipes decreases. At low temperatures, extreme caution should be exercised when moving them.
8. When unwinding pipes coiled in a coil, special care must be taken as the released end of the pipe unwinds with considerable force

## Pipe storage:

Precautions should be taken when storing pipes:

1. Pipes should be stored on an even, smooth, preferably wooden surface or surface free from sharp objects, stones or protrusions that will not damage the pipes.
2. Pipes in straight sections, factory-packed into bundles using wooden frames, can be stored in layers up to a height of 3 m , with the frame of the higher bundle resting on the frame of the lower bundle.
3. If the pipes have been unpacked, they can be stored in a pile with a maximum of 7 layers and a height of no more than 1 m .,the lower layer should rest on wooden sleepers and the sides should be secured against displacement with wooden supports. The spacing of sleepers and supports should be $1 \div 2 \mathrm{~m}$.
4. If pipes with different stiffnesses are stored in the pile, the pipes with higher stiffness should be placed at the bottom.
5. The maximum height of pipe storage at the construction site should not exceed 1.5 m for pipes in factory packaging and 1.0 m for pipes in straight sections stored loose in piles.
6. Pipes in coils can be stored vertically in one layer (a vertically standing coil cannot be additionally loaded) or horizontally in a stack, stacking subsequent coils up to a height of 1.5 m .
7. Pipes in coils with a nominal diameter equal to or greater than DN 90 should be stored in a vertical position in stands specially built for this purpose.
8. When storing pipes in sections on racks, their structure should provide adequate support to prevent permanent deformation of the pipes.
9. Pipes should not be stored in the immediate vicinity of fuels, solvents, oils, greases, paints or heat sources.
10. Pipes should be stored in a roofed room, protecting them from direct exposure to weather conditions. Free air flow must be ensured. Storage in places directly exposed to sunlight (UV radiation) is not allowed, which leads to degradation of the material and loss of mechanical properties.
11. In the case of pipes, it is agreed that the pipes may be stored outdoors for a period of 12 months. If they are to be stored for a longer period of time, it is beneficial to protect them against solar radiation (UV) by placing them under a roof. Free air flow must be ensured.
12. The maximum storage time for pipes not protected against sunlight is 3 months. The use of pipes for which this condition has been exceeded is possible only at the sole responsibility of the recipient.
13. The storage temperature should not exceed $45^{\circ} \mathrm{C}$.
14. In extreme climatic conditions, it is necessary to provide special conditions for pipe storage.
15. If pipes are delivered in bundles or other packaging, the tape and/or packaging should be removed immediately before installation.

If the above instructions are not followed, the warranty becomes invalid.
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